

Nat'l Bee-Keepers' Convention at Los Angeles, Aug. 18-20

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APIARY OF A. H. KLINK, OF TREMPLEAU CO., WIS.
(See page 420.)



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DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

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- 2d.—To protect and defend its members in their lawful rights.
- 3d.—To enforce laws against the adulteration of honey.

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AMERICAN ESTABLISHED IN 1861 BEE JOURNAL THE OLDEST BEE-PAPER IN AMERICA

43d YEAR.

CHICAGO, ILL., JULY 2, 1903.

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Editorial Comments

The Queen is the Soul of the Colony.—If you are a beginner, one of the first truths you should learn is that it is of such great importance to have a good queen in a colony that too much pains can hardly be taken to have your queens of the best. If none of your colonies is up to the mark, then no better investment can be made than to buy a queen of good stock. If all your colonies are good, you may do well enough to leave the entire matter of queen-rearing to the bees, that is, if you prefer to allow the bees to swarm naturally. If any one colony is better than the others, then it will pay to be to the trouble of having your young queens mainly, if not entirely, reared from that superior stock. Even if it makes a good deal of extra work, it will pay well in the end.

Quality of Queens Mailed.—It is pleasant to find a man speaking of his competitors in a broad-minded way. G. M. Doolittle says in *Gleanings in Bee-Culture*:

I have not had the experience of some in receiving from queen-breeders queens of which 90 percent turned out poor, or "as worthless as so many house-flies," as one writer puts it. I have rarely received anything but first-class queens in all I have purchased; and from these queens purchased, and from what I know of several of our queen-breeders, I have not a single doubt that thousands of the queens sent out by queen-breeders are every whit as good as those reared under natural swarming, for I am satisfied that the most of our queen-breeders to-day spare no pains to bring about an equally favorable condition to that under which natural swarming is conducted, while rearing their queens.

Shall Section-Supers Be Added Under or Over?—A series of articles on comb-honey production, "How to Get All the Sections No. 1 and Fancy," has appeared in *Gleanings in Bee-Culture*, written by Orel L. Hershiser. After directing to give the first super in the usual way, Mr. Hershiser proceeds:

If the flowers are secreting nectar in abundance it will be but a few days till capping of the combs in the super commences, which will indicate the time when a second super should be placed *above* the first. Capping will now progress in the first super. At the same time, the honey-laden bees returning from the fields, not all being able to dispose of their burdens in the first super, which is rapidly approaching completion, will commence storing in the second, and continue without interruption. The opportunities for work in the first super are rapidly diminishing, and day by day fewer bees can be employed there, till finally the super is finished, and its completion will have been accomplished under the most favorable circumstances for thorough and complete work. But there is no enforced idleness, for the upper super furnishes store-room for all the nectar that can not be stored in the first one. In due time capping will commence in the upper or second super, if the honey-flow continues, which indicates the time when the capping in the first is finished. The first super may now be removed from the hive; and the second one, which is now being capped, substituted in its place, and a third super placed *above* it. When capping has commenced in the third super, the second, or one next to the brood-body, will be finished, and may be removed; the third, or one over the second, substituted in place of the latter, and a fourth placed *above* the third; and so on to the end of the season.

The natural instinct of the bee is to store its food as near as possible to the brood. The apiarist should heed the teaching of Nature, and keep food and brood in as compact a space as possible, and not violate the rule so unerringly pointed out by the Creator, by lifting

the partly-filled super and placing beneath it one containing empty sections, according to the orthodox teaching. By practicing the orthodox method, much of the working force will be withdrawn from the upper super, and work will be distributed through that and the lower one in undesirable and unprofitable proportion, oftentimes resulting in none of the sections being properly filled.

It will be noted that the advice is to give the additional super on top at all times, and never allow more than two supers on at a time. This view, apparently endorsed by the editor of *Gleanings*, is at variance with the practice of many, probably of most, comb-honey producers who put the second super under the first, not waiting for any sealing in the first if there be a good flow, but adding supers under as fast as all are crowded with bees, only putting empty supers on top toward the close of the season.

The plan advocated by Mr. Hershiser will undoubtedly secure sections thoroughly filled out, and more promptly sealed, but the beginner should understand that it is not without objections. With an empty super on top, the bees must be crowded harder to make a beginning than when the empty super is under, and this harder crowding means just so much more inducement toward swarming. The crowding also means more superfluous work in the way of brace-combs and burr-combs, honey being stored between the two supers, fins built on separators, etc. The honey being sealed in the lower super, it will be more rapidly done, and rapid sealing tends toward whiteness of comb; but the very thing that tends toward whiteness in that direction has the drawback that it tends toward darkness in another direction. Bees have a trick of carrying bits of the old, black brood-comb to help finish up the sealing of sections if the sections are close enough to the brood-combs, so more of this objectionable work will be done when the finishing is done in the lower than when it is done in the upper super.

It is a bad thing to give too much room; it may be a worse thing to give too little. A very weak colony may never need more than a single super, there being plenty of room in that one super for all the bees that can be spared from the brood-nest. It does not require a very strong colony to fill two supers, there may be force enough to fill three, four, or more supers. When a powerful colony has four or five supers crowded with bees, the work going on at all points in all of the supers would there not result a serious loss to confine those bees to two supers?

While not questioning that with never more than two supers on at a time, the additional super always being added above, a greater proportion, possibly a greater number, of fancy sections may be obtained, there is room for serious question whether the total amount of money received for the crop will be as great as by following a different plan.

Don't Use Old Bees for Rearing Queens.—After worker-bees have attained the age of about 16 days, at this time of the year they begin field-work, and although they may be forced to do house-work, they are not so well fitted for it as when younger. So, when getting queen-cells started, do not depend upon old bees. The suggestion is likely to occur to the novice, "If I move a colony of bees from its stand, putting in its place a hive containing one or two frames of brood, the field-bees will naturally return to the old stand, and finding no queen there they ought to proceed at once to rear one, and that will be an easy way of making two colonies out of one." If there were no other objection to the plan, a sufficient objection would be that rearing queens is not in the line of business those field-bees have been following, and the queens they rear will be more or less inferior.

Wagon vs. Wheelbarrow.—Quite generally wheelbarrows rather than small wagons or carts are used by bee-keepers in their work about the apiary. G. A. Deadman, in the Canadian Bee Journal, makes a strong plea for something with more than one wheel. One of the advantages of a wheelbarrow is that a load is more easily dumped from it than a wagon, but one does not want to dump things used in an apiary, for the more easy a wheelbarrow is to dump the more easy it is to upset. One must be careful how a load is placed on a wheelbarrow, or over it goes. The wagon is stable, no matter how the load is placed.

An advantage that would not occur to every one is that the wagon takes up less room, making it convenient to have two at a time in the extracting-room, one with full combs, the other to receive the empty combs.

One trouble is that while a wheelbarrow is a staple article of sale, easily found in any town, and at a low price, the wagon is hardly to be found at any price, and it is expensive to make one.

A New Section-Frame is referred to in the British Bee Journal, although no description is given of it that is very definite. The nearest that comes to anything like a description is as follows:

I wonder how many bee-keepers have heard about the recently invented section-frames? With the exception of being close-ended, they are very similar to the ordinary shallow frame, and are equally suitable for extracting; but when intended to be sold as comb honey, by means of a simple arrangement which causes no obstruction to a free passage over the entire comb surface, the bees are made to store the honey in three separate divisions, any of which can be cut out without interfering with the others.

Parthenogenesis and Its Unsolved Problems are to have careful investigation at the hands of E. F. Phillips, a prominent graduate student of the University of Pennsylvania. He has gone to Medina to pursue his investigations, taking with him the best apparatus the University affords.

Association Notes

Mrs. Dr. A. B. MASON, the widow of the late Secretary of the National Association, has sent to Eugene Secor, the former General Manager, a check for \$81.08, which is supposed to be in full of the funds belonging to the Association in the hands of Dr. Mason at the time of his death. This amount likely includes what Mr. Abbott collected as dues during the month he served as General Manager, which amount he forwarded to Dr. Mason.

The above information we have from General Manager France, to whom Mr. Secor forwarded the check from Mrs. Mason.

THE LOS ANGELES CONVENTION is going to be well attended, if we may judge by the inquiries coming in. Here is a sample:

EDITOR BEE JOURNAL:—My wife and self are planning to go to the big convention at Los Angeles, and would like to go with the crowd from Chicago, Aug. 12:

1. How many stop-overs are allowed, and where?
2. Must we all go home together?
3. Does \$50 include the berth in the sleeping-car?
4. How much extra would it cost to see Grand Canyon?
5. How much do you think it will cost for a couple to make this trip from Chicago, including all expenses?
6. Would you advise us to go via Chicago, or try some route from the Twin Cities?

Any figures, advice, or particulars, regarding this matter will be greatly appreciated. LEO F. HANEGAN.
St. Croix Co., Wis.

To the foregoing we may offer the following:

1. As we understand it, as many stop-overs as are desired will be allowed west of Colorado.
2. It is not necessary that all should make the return trip together. Neither is it necessary that any one should return over the same route as when going. Arrangements can be made to go one way and come back another at the same cost.
3. Fifty dollars for the round trip from Chicago does not include the cost of berth which, in a tourist car, is \$6.00 for one way.

4. The extra cost for seeing the Grand Canyon will be \$6.50 for car-fare and \$2.00 for berth, if taken.

5. It would be very hard to estimate the cost of the trip, as different people will have different views, and different sized pocket-books. However, it ought not be very hard for each one to estimate about what his expenses would be, when he knows the exact cost of the railroad and berth tickets. It would be well, though, to take plenty of money along, as there may be some side-trips that one would like to take out there. After going so far, it would seem too bad to deny one's self anything that really ought to be seen and enjoyed. We are looking forward to it as the one great trip of our lifetime, and although we can not be away from our office much more than ten days, we hope to take in everything possible during the trip.

6. Of course, we would advise all who can possibly do so to join the party going from Chicago, as it will be "the more the merrier." We are anticipating about the best part of the trip on the going journey. There will be ample time for visiting, getting acquainted, enjoying the scenery, etc., as we go along. There is really no fun traveling or seeing things alone.

We have answered the questions of Mr. Hanegan in this way, as we suppose there are others who would like the information that we have tried to give. If there is anything else connected with the trip that any other reader would like to know we would be pleased to tell all about it, so far as we are able. We only hope that every bee-keeper, who can possibly do so, will arrange to go to the Los Angeles convention. California bee-keepers are going to do great things for those who attend, and we are anticipating the largest and best convention the National has ever held. Of course, every bee-keeper who has not yet been to California will want to go on this trip. It will be a memorable time and convention.

Miscellaneous Items

J. A. GREEN, Foul Brood Inspector of Mesa Co., Colo., reported that on June 19 a splendid honey harvest was just drawing to a close, cut off by the mower. It was a sad day for Illinois bee-keeping when Mr. Green decided to go to Colorado. He is a bee-keeper of whom any State may well be proud. We shall hope to hear more from him as time goes on.

THE APIARY OF MR. A. H. KLUCK appears on the first page this week. He wrote thus about it:

I send a picture of my apiary and farm-house. It shows also myself and two of my daughters, who are quite handy in the apiary. I have kept bees for about 14 years. Since 1896 I have had from 95 to 110 colonies. The past three years I have had good success in preventing swarming. I use the 8-frame Wisconsin hive, and run them entirely for comb honey.

We read the American Bee Journal, every issue of which is worth its weight in gold. A. H. KLUCK.

A DONATION OF STRAWBERRIES was sent us by Dr. C. C. Miller last week. We had heard some pretty big stories about the Doctor's strawberries in other years, but this is the first time we have had a chance to sample them. We can say that the berries are actually as big as the stories told about them. The 30 boxes were all the finest we have ever seen. We do not know what connection the Doctor's strawberries have with the "Stray Straws" he furnishes to a certain bee-paper, but if the straws are appreciated by any who read this they will have some idea of the appreciation we have for the strawberries.

The Doctor said, when sending the strawberries, that they would have sent bigger ones but could not get them. We are sure that bigger berries would not be any better.

Dr. Miller and his family are what some people would call cranks on roses, and strawberries, and bees. But what finer trio could be found? Also, what happier trio can be found than Dr. Miller, Mrs. Miller, and Miss Wilson? "I don't know" would be a good answer.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Convention Proceedings

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 406.)

STARTING PEOPLE IN THE BEE-BUSINESS.

"Is it advisable for bee-keepers to sell bees to people who have no interest in the bees, but who, from reports of fabulous wealth obtained from the bee-industry, wish to go into the bee-business?"

Mr. Abbott—That depends upon whether they have the money to pay for them.

Mr. Pettit—Don't sell them any.

Mr. Whitney—If I refuse to sell to them they are all the more anxious to buy from somebody else, and if I sell them and then advise and assist them until they learn that there is something more to the business than they care to do, they give up in disgust, 97 out of every 100.

Dr. Miller—That's all true enough, but you are doing a lot for the money you get there. There are two things that you have to do for your money. They will come to you at your busiest times. "Now, I want you to go and see my bees," and think you have plenty of time to go and do it, and feel hurt if you don't do it, and just so far as they are successful they are taking that much from your crop of honey. They pull out pretty surely, but while they are pulling out they are pulling something out of you, and if they succeed with half a dozen colonies, that's just so much taken out of it. Perhaps if you refuse to sell them it will make them think there is a bonanza in it. I don't know which is the best way. I believe in my locality it is about safe not to sell them.

Mr. Abbott—I have given away about a half million dollars worth of advice to that kind to people, and I have got my living by doing it. I feel richer and better, and I have good honey now, and that's worth more than anything else.

WARM WEATHER AND WINTERING OF BEES.

"Has this warm weather made the bees have less honey, and have they consumed more honey than usual on account of the warm weather?"

Dr. Miller—I should say that there is a wrong assumption in that question. I don't know the difference between my locality and Chicago. This winter is unusual in the great amount of stores that the bees have. I don't think I ever knew a year in my life when they were so fully supplied with winter stores.

Mr. Wilcox—There is a very important question arises in there, that I have never heard discussed. Is warm weather the early part of the winter detrimental in any manner to the wintering of the bees? Does it reduce their stores materially? I have never heard that discussed. I have often thought of it.

Mr. Arndt—I am the one that asked that question. About the first of October I examined the bees and found them in good condition. Last Saturday I was going over them, and a marked colony which had a lot of honey is apparently light now. I attribute it to the warmth; the bees were too active, and consumed the stores which they would not have consumed had it been cold so they couldn't get out.

Mr. Abbott—I want to ask if we should discuss that question and discover that the warmth felt wasn't a good thing for the bees, what could we do about it?

Pres. York—See the weather man!

Mr. Wilcox—They could be placed in a more shaded place where the temperature would be less. I usually have mine working more or less around the shop or neighborhood, and don't try to stop them, and I often wondered whether it was injurious or not. There are many things I could do to keep them more quiet during October and November.

Mr. Clarke—Is that to find the condition, the lightness of the bees at the present time around Chicago? I don't think that there has been any answer to that question at all.

Pres. York—What do you find?

Mr. Clarke—From what I have heard from bee-keepers, bees are light in stores, and more especially around Chicago locality, and those that take off their supers before the honey-flow are nothing more than in a condition to go through the winter. Those that left their supers on until the close of the honey-flow, from all I hear, their bees are in a very light condition.

Dr. Nussle—The same up in Wisconsin.

Dr. Miller—In answer to the question I should say: Yes, there has been more honey consumed this fall, because there has been warm weather.

Mr. Clarke—That is just one reason for there being a light honey crop, and that warm weather came at a time when it ought not to come, and the bees could go out and fly and not get anything. It is exactly the same way with a human being. If they work they have to have more feed.

Mr. Horstmann—I don't think the warm weather had any effect on the bees in that respect. I think there was no honey for the bees to get. I had one hive on the scales, and the highest they got in one day was six pounds, and it ran down to one-half pound along during September, and then they held their own, got just about stores enough out in the field for their own consumption. The warm weather had no effect at all, I think. We had some flowers right along during the summer and fall, and there was very little honey to get. We had lots of white clover, but the bees didn't get any honey, and the field was full of blossoms, but I had to feed my bees.

Dr. Miller—You came to a point where your bees flew out at will, and gathered just what they used, and the next day they flew out and didn't get quite as much, and then you were losing.

Mr. Arndt—Yes, sir; in the month of November it seemed to be they didn't get anything at all.

Mr. Wheeler—Mine were working on dandelion until Thanksgiving Day.

Mr. Horstmann—One thing we must consider, the bees have been rearing brood, and it takes considerable honey to rear brood. If they had quit rearing brood earlier this fall, the chances are the colonies would have run down considerably more. My bees have now just about quit, and the hive I have on the scales, is just about holding its own.

Mr. Whitney—I bought an apiary late in the season at Lake Geneva, Wis., about 15 colonies. I took off the supers and they were well filled with honey for extracting. On taking them off and examining the brood-chambers I found them almost entirely empty, about the middle of October. Of course, I removed the empty ones and placed on the brood-chamber the surplus, and I was surprised to find that the brood-chamber had plenty of surplus in the second story. I removed that by placing the surplus in the other tier.

NUMBER OF COLONIES FOR ONE MAN.

"How many colonies can one man care for properly when producing comb honey?"

Dr. Nussle—It depends upon who the man is. From one to 500 colonies.

Mr. Whitney—As many as can be profitably kept in one apiary.

Mr. Wheeler—I think I would have gone to the poor-house long before this if I had run only one apiary. I have five, and attend to these myself, as nearly as I can, and as it is we have hard work to make ends meet at the present time; but I believe that one man can manage more than one apiary, and I believe it is so considered. I know I can do it, and have no trouble at all.

Dr. Miller—How many colonies do you think you can run alone?

Mr. Wheeler—Five hundred.

Mr. Wilcox—I can't see that he has differed from me, only in the form of expression. As many as can be kept in one apiary anywhere, and I believe they can keep from 400 up. I have no doubt but what a man can run three apiaries for comb honey, but I think it will be safe to say that he can attend to as many as can be kept in one apiary.

Mr. Clarke—Is the question how many he can run by himself, or with assistance?

Pres. York—One man.

Mr. Clarke—And run them all for comb honey?

Pres. York—That is the question.

Mr. Clarke—It is a pretty hard question to answer, that's sure. It can be answered only by the man himself

who does it, and according to what time he gives to it previous to the honey-flow.

Dr. Miller—Give him a chance to spend a year on it and then report.

Mr. Wheeler—I understand we were talking about Chicago locality. I don't believe in over 100 colonies in Cook County in one place.

BLACK LIZARDS AND BEES.

"Do black lizards, such as are carried in the cellar with potatoes, eat or attack bees in the cellar or out-of-doors?"

Mr. Fluegge—I carried six or eight out of my bee-cellar. I put them on the scoop-shovel and threw them out. I think they eat insects. They are very common, and you are sure to find them in potatoes.

Mr. France—They are harmless as far as the bees are concerned.

SHALLOW OR DEEP BROOD-FRAMES.

"Which is the better, a shallow brood-frame or a deep frame?"

Dr. Miller—Yes, sir.

Pres. York—Dr. Miller says, "Yes, sir." Does anybody disagree?

Mr. Wilcox—I think that question should be amended so as to ask what depth of brood-frame is best.

Pres. York—I don't think we have a right to amend it.

Mr. Wilcox—We can not agree on what is shallow or deep.

HYBRID BEES OR ITALIANS.

"Is there any advantage in hybrid bees over the pure-blood Italians (hybrids meaning a cross between Italians and black bees)?"

Dr. Nussle—There is no advantage in hybrids over Italians.

Dr. Miller—Yes, sir, you are safer from the boys of the neighborhood troubling your bees.

Dr. Nussle—I never have any boys troubling mine.

Mr. Clarke—There is an advantage, but lots of disadvantages. Undoubtedly for comb honey they do a little whiter capping. They leave more of an air-space between the honey and the capping, which causes the honey to look whiter, but there are so many other qualities about them that are objectionable that it is pretty hard to tell.

Dr. Miller—That runs a good deal by standards. Take a standard of hybrids and they will cap particularly white, and there are many Italians that will cap whiter than the others. I hardly think it fair to take them as a whole, and say that hybrids will cap honey whiter than the others.

Mr. Clarke—Isn't it a fact the lighter-colored the bee the more the tendency to poor capping?

Dr. Miller—I should say hardly.

Mr. Clarke—It has been my experience. I have tried a great many breeds. For that reason, I must say five out of six queens I had to kill. For extracting, some of them I won't dispute but what they are good workers. As a general thing they run to poor capping. That has been my experience.

Mr. Stanley—It is all in the strain of the bee. I have had some of the yellow bees put up the whitest and some put up some of the dark. It is all in the strain of the bee, is my experience.

Dr. Nussle—I understand that is brought about by the capping being very close to the honey, making that appearance. The Italians have more tendency to do that than the Carniolans or black bees, or a cross between them.

TAKING BEES OUT OF THE CELLAR FOR A FLIGHT.

"Is it advisable to take bees out of the cellar for a flight any time before taking them out for good?"

Mr. Baldridge—No.

Dr. Miller—That is a rule that has been accepted, and we have all given up and felt it was settled, but down at Medina, Ohio, they have unsettled it. That is the trouble with our settling down on something. I know for sure that there is one of the things that can't be. If you take them out and put them back there will be damage. In spite of that they did it at Medina and got along nicely. I am going to try it and see whether they will be all dead the next spring. I am of the opinion that we settled on it prematurely. Those Medinaites have done it all right.

Mr. Whitney—Wasn't that an exception to the rule?

Dr. Miller—I don't know.

Dr. Nussle—I don't think you could ever do that successfully in Wisconsin. We have snow on the ground all winter, and along until it goes off in March or April. It would never do when it is ever so warm with snow on the ground.

Dr. Miller—Well, that might be true there. The conditions here and as far south as Ohio will give you plenty of times when there is no snow on the ground at all. This is perhaps a very important thing to find out about. If it is a fact that in the middle of winter they took them out and let them take a flight, and they are not the worse for that, then it is worth while for all to know it. It might be well for a number of us to try that thing this winter, particularly where the ground is not covered with snow.

Dr. Nussle—Ought it to be warm, about 60 degrees?

Dr. Miller—A day when it is about 60, and dry, and see whether they come out better or worse. Here is what we have done. I don't know just how much was tried in the first place, but it was given out as a law, and we all accepted it, that we must not take out any bees until we took them out for good, and for years we have acted upon it. Suppose we try that, and see if they come out as they did at Medina.

Mr. Horstmann—I moved out my bees early last spring, and we had a cold-spell and I put them back and set them out a second time, and it did them lots of good, and the small colonies came out splendidly in the spring, and built up good and strong. I believe the reason was that I put them back and got them out again when the weather was more settled. I think I have lost very few bees by doing that, and I would have lost a good deal more on account of uneasiness. They seemed to be very quiet, and they remained quiet.

Mr. Wilcox—I have too many bees myself to carry them out and in. I have neighbors who, under my advice, have done it with two or three colonies and succeeded. I advised them not to carry them out until the first of March, but if it comes warm enough for them to fly early in March be sure and place on the stand early in the morning, and not let them out more than one day, and the next time out place again on the same stand, so as not to keep them continually mixing up. As soon as they get a flight, bees commence breeding. My own bees are not carried out until the first of April. It is true of my bees, after they commence breeding, I don't want them to remain in winter quarters for three or four weeks.

(Continued next week.)

Contributed Articles

Co-Operation Among Fruit-Growers, Etc.

BY PROF. A. J. COOK.

I HAVE kept the readers of the American Bee Journal informed regarding combination among citrus fruit-growers of California. It will be remembered that in 1893, with only a few thousand car-loads of fruit, the market had become demoralized, so that many orchardists found at the end of the season they had really lost on their fruit. The amount actually received for the sale of fruits was less than the expense of marketing. Many fruit-growers were entirely discouraged, and all felt that something radical must be done at once. This led to the organization of Southern California Fruit Exchange. A large number of the growers joined this Association, and I have previously explained its workings. It really saved the fruit industry of Southern California.

Since that time the Exchange has done better for its members than has any commission man or any other organization of citrus growers. Yet, strange as it may seem, hardly half of the fruit has ever been marketed by the Exchange. Indeed, the commission men, in the aggregate, have done just as much in the last few years as the Exchange, each doing about 44 percent of the marketing. The balance of the fruit was sold by individuals who were in no organization. These latter were usually very largely producers who had special advantage from a very wide business acquaintance in the East. Often these men had previously done business either in New York or Chicago, and thus had exceptional acquaintance and advantage.

The present season has been an unfavorable one. The weather has been very cool and thus the fruit was slow to ripen, and has not had the sweetness for which California fruit has previously been famed. The low prices and the fact that there was no single selling agency has been a

great disadvantage not only to the Exchange but to the commission man. While the Exchange has suffered less than other selling agents, all have suffered greatly. It is stated that the commission men have lost much money, and one of our most prosperous orange-growers, who sells his own fruit, and who has usually received the largest prices, told me a few days since that he had hardly paid expenses this year. All this led all interested parties to consider seriously whether there was not a better way.

NEW SELLING AGENCY.

A few weeks ago the managers of the Fruit Exchange and several of the commission men—packers who have bought and sold much of the California citrus fruit—got together to consider the matter of a sort of trust—a combined selling agency. Previous to this time the Exchange knew nothing about where the commission men would sell their fruit, nor yet did any commission man know where the Exchange would ship its fruit, or where any other commission man would sell his. This lack of control and distribution was a serious menace, and all recognized that some scheme must be devised to remedy the evil. After many meetings and much consideration of the entire subject, the following plan was agreed upon:

All citrus fruit should be sold under one agent. This agency will consist of two factors here in California. One will be the old Exchange, which will carry on its business just as it has before, except now it will know where all fruit is being sold, and will be able to distribute its output to the very best advantage.

The other factor consists of what is called the citrus union, and will be made up of all the commission men or packers outside of the Exchange, as I think now nearly all have joined the organization. The manager of the old Exchange is the manager of the new selling agency.

We see, then, that this new selling agency will have absolute control of the distribution of the fruit, and thus there will always be an intelligent distribution. The new organization will always have its finger upon the pulse of the market and will know just where to sell the fruit, that no car-load will compete with any other car-load. In fact, all will be co-operation as far as marketing is concerned, and there will be no competition.

Of course, there will still be competition, as all the fruit will sell upon its merit, and only the best fruit will bring the best price. About 90 percent of the output is now controlled by this new selling agent. It remains to be seen what the individuals who have been selling their own fruit will do. Some of them have already joined this new organization. Others will probably do so; while a few may very likely remain outside. If they do, it will only be because of peculiar circumstances they can do better. The new selling agency will have their sympathy, and they will do nothing to antagonize it.

Of course, this new selling agency is in a sense a trust. It will not, however, do as many trusts do, try to lessen the output of fruit that they may thereby raise the price. They will, however, control distribution, and in a certain sense the market. This will result in preventing all glut of the markets, and will secure an even, fair distribution, and uniform prices for good fruit. It is not probable that it will raise the price to any extent to the consumer.

It is strange that the old Exchange did not get nearly all the fruit-growers. All acknowledge, so far as I know, that it was a good thing, and really came as the salvation of the fruit interest; while many believed, or hoped, that they could get better prices outside the Exchange, and thus they handicapped this latter association by preventing that control of distribution of the fruit which is so very necessary to the best success.

I believe the bee-keepers are wide awake in this matter of intelligent co-operation. It seems to me that any matter of history in this great movement, like that which I have given above, is of special interest and importance to them at this juncture. The Exchange in the citrus industry of Southern California not only saved the business, but also makes possible this new combination.

I neglected to say that in the new scheme the Exchange is not to exploit the fruit-growers who have previously sold to commission men. The outside packers have also promised not to take the fruit from any one who has previously been in the Exchange. Those owning orchards that are just coming into bearing are to be about equally divided between the Exchange and the Citrus Union. Our most intelligent fruit-men rejoice in the Exchange and its great success. They rejoice now still more in the belief that this new combination will remove the one obstacle in the way of

success with the Exchange in the past—that of controlling distribution—and are happy in the belief that more prosperous days are just at hand.

FOUL BROOD LAW.

I was interested in the fact that bee-keepers in Illinois had to raise money to secure legislation regarding a desirable foul brood law. California secured an excellent law with no expense and very little effort. Why was this? Because Southern California is very generally organized. There are many farmers' clubs. Thus they have tremendous influence. They considered as a whole the matter of legislation, and decided that they needed six laws, one of which was the foul brood law. They went solidly to the Legislature and secured every enactment that they desired.

Every State should have these clubs, and then our farmers could secure their rights, which they have so signally failed to get in the past.

Los Angeles Co., Calif., May 16.



Apiculture in the United States vs. Europe.

BY C. P. DADANT.

I NOTICED and read with pleasure the article on this subject by J. A. Heberly, on page 104. The differences existing between bee-culture in Europe and this country are great indeed. The different opinions relating to hives are mainly based upon the greater or less ease that those hives give for manipulations. The hives in themselves, when of the same size, are equally serviceable in the production of honey, and the bees in a common box without frames will harvest just as much honey as those in the most expensive frame-hive. But the ease of manipulations tells on results, because when an apiarist can examine his bees and supply their wants without difficulty he is more likely to do it when manipulations are impossible or difficult.

The Berlepsch breech-loading hive, which we compare to a cupboard, has made no progress outside of Berlepsch's own country, evidently because its manipulation is more difficult than that of other frame hives. But Mr. Heberly is correct in his statement that in house-apiaries this hive has some advantages, because it opens from the rear. But our American apiarist has little use for the house-apiary.

In Europe generally, Switzerland, France, Germany, the home is often surrounded with walls, often very high walls which were once built to protect the inmates against the depredations of brigands. Though the present conditions of civilization have made those walls unnecessary, yet the customs remain, and in my travels I often saw a new house built with a 12-foot wall around it, like a fortress. This seems natural to the European. To us it is abnormal. One may travel through the greater portion of the United States without being able to see a 10-foot wall. Such walls are exceptional. Here and there a board fence will hide the out-houses, but in most cases the home is left unsurrounded by any obstacle except such as may be necessary to mark the limits of the yard, a shallow picket fence, or, to keep out cattle, a barb-wire fence. So we naturally do not think of defending our bees against intruders.

The house-apiary in Europe is most usually built against a wall, two sides of this wall making two of the walls of the apiary. The expense is thus much less than if the entire structure had to be built purposely for the bees. The temperature of Europe being much more uniform than that of this country a closed house may be used in which the manipulations are conducted even in hot weather without suffering. A bee-house here would have to be adapted to the climate. It would have to be built more as a shed than as a house; most of the bee-handling has to be done when the weather is the hottest, and a closed house would be almost out of the question.

A bee-house with several stories, with openings for bees in every direction, is objectionable, both owing to the bad exposure that some hives would have with flight towards the north, and to the danger of stings from all sides, for it is well known that bees are more prone to become offended at movements of men or animals when directly in front of their entrance. I have seen several house-apiaries discarded owing to these faults. The manipulations are also difficult unless the hives are placed on different floors and entirely isolated from one another. The best house-apiary that I have seen was a shed high enough for a man to stand in, with the roof slanting backward, front to the south, and a tight wall on the north and on each ead. The north was provided with two or three doors, so that one might get to

any part without having to pass all along the inside. But there was enough space behind the hives to work freely and even to pile some empty hives from place to place. The front was entirely removable at will. This front was in sections, like large shutters, and was entirely closed during the cold days. On warm winter days, and during the summer, these shutters were removed and allowed the air to circulate freely. This made the shed pleasant for work, in fact nearly as pleasant as the shade of trees. But there were drawbacks even in this apiary. The hives had to be placed in close proximity to one another, and this made trouble when the young queens went out for their bridal flight. It is well known that, not only the young queens, but the young bees as well, often make a mistake and enter the wrong hive when the hives are too numerous and alike in appearance, especially if they are crowded together. The mistake of a worker-bee, or even of a hundred workers, has but little importance, but the mistake made by a young queen is of vital importance to the colony, as they usually have no brood of proper age to replace a queen that has not returned from her bridal flight.

Then we have another objection to house-apiaries which is insuperable in many instances. It is when we establish out-apiaries. The bee-keeper who has many bees does not have several farms of his own. So he is compelled, when establishing out-apiaries, to place them on some other man's land, and he does not know how long his bees may remain there. He cannot go to the expense of building a house in such circumstances. We had the experience of this ourselves once. We had a very good friend on whose farm we had had bees for years, and we finally decided to build a bee-shed, feeling sure that we would never be compelled to remove the bees. Within two years, changes happened in that man's family which compelled him to leave the farm and go to live in the city. His home was rented to a tenant, and the management of that tenant was such that we very soon decided to remove our bees.

The European who keeps bees as a business is rare, while here, especially in Colorado, California, etc., he is met everywhere. Land in Europe is high and in great demand. The spot occupied by an apiary is necessarily confined, while in our land we pay but little attention to the amount of space needed. In fact we waste land, and will probably waste it for many years to come, our country being so large. What will do for us is not acceptable to them.

Hancock Co., Ill.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Work Done by the Sisters.

I am just beginning to find out what an amount of work is being done by our bee-keeping sisters. The energy, courage and fortitude displayed by so many of them is truly inspiring, and surely ought to meet with success. Some of the letters I have received were not meant for publication, but they are so interesting and helpful that I trust I will be forgiven for giving all the sisters the benefit of them.

Price of Hives—Removing Honey, Etc.

My experience is very limited in bee-culture. I have seven colonies, and keep them only for home use. I lost two swarms this week, and had ordered hives and they came, but they were not set up, as I had no one who could do so.

The way I take my honey is to take the top of the hive off that holds the pound boxes, and carry it a short distance from the main hive. The bees will all leave and go to the hive again. Then we take the honey and replace new pound boxes in place of the old, and place the top on again. I have not been able to attend to my bees myself of late, having been sick for six months with sciatic rheumatism, and my right arm nearly disabled.

1. What are hives worth there all set up and crated, ready to be shipped, say six at a time?

2. I take my honey only as stated above. How do you take yours? and in what months?

I should like to know more about bees, for I think they deserve all we can do for them. S. M. PAYNE.

St. Mary's Co., Md., May 22.

ANSWERS.—1. An 8-frame hive, all complete, nailed and painted, and crated ready to ship, will cost you \$2.50 at Chicago. The 10-frame is \$2.65. These have one super for comb honey.

2. We use T supers to hold our sections, and take each super off any time from June to September, whenever finished.

I hope that troublesome rheumatism is better. A few bee-stings might be of benefit. While the treatment is rather heroic, some claim to have been greatly helped by it. You might try a few by way of experiment.

A Busy Sister.

I like the American Bee Journal ever so much, and what little I know about bees I have learned from the Journal. I have nine colonies. Yes, I do my own work. My husband does not like to be among the bees, and we do our own farm work so far, but the work is too hard for us two. But I hope to have some help so that I can take care of more bees. I do like them, for they are as busy as myself, and the humming is so sweet and healthful.

I have not asked questions because I am so poor a writer, being German, and never having gone to the English school, so I listen to those who do write, and learn that way. There is no one here who likes to tell what he knows about bees. We built a new house last summer, and put a furnace in the cellar. It is nice and dry for bees. Mine came out in good shape this spring, and are working well.

Waupaca Co., Wis., May 24.

LOUISA THILKE.

Please don't hesitate to ask questions. This department is for you just as much as if you were a good English scholar. Some of us may envy you your knowledge of German.

Again With the Bees.

When we sold our home in Virginia and came to California I was obliged to give up my bees, until about six weeks ago, when I happened on a tramp swarm, as they are termed here, near Arch Beach, in Orange County, where I was staying, and brought them home in a box, then transferred them successfully into a Langstroth hive.

California is a great country for honey, but the last month has been so cold and foggy that the poor bees have had rather hard work. But now the real California weather is here, warm and bright, and as the hills around about us are covered with black sage, followed by several other varieties, and wild buckwheat, there is splendid pasture for them, and I hope for great things from my small colony.

Los Angeles Co., Calif., June 4. MARTHA WHITE.

A Ranch Bee-Keeping Sister.

I am not much of a hand to ask questions, because if I wait quietly some one always asks just what I want to know, and the bee-keepers have all been very kind to tell me and help me in every way possible. I like the American Bee Journal, and have learned lots of good things from it. I am going to get Dr. Miller's book. I like the way he answers the questions, and I feel as if I were acquainted with him.

I have been keeping bees only a short while. My husband bought 5 colonies and let them out on shares two years ago this spring. Then I helped a little and learned a few things, and I thought that common-sense was a good thing to use. So last year I took them myself, increased them to 31 colonies, but got no honey, as there was no honey last year.

I fed three sacks of sugar, and brought them out nice and strong this spring, and have 64 colonies in good shape. When a swarm came out I went to the hive they came from and cut out all of the queen-cells but one good one, in order to keep down the increase and to keep them strong. I also sent back some small swarms by killing the queen.

Now I am getting ready to extract just as soon as my extractor gets here. I am a little late about it, but I could not get an extractor sooner. I have had to put on two and

three supers so as to keep the bees busy. I also tried putting an empty hive under for a new swarm, and they work all right. I have some of them piled up three high, and they are full of beautiful white honey. I expect to have five tons of extracted, and several hundred pounds of section honey, but I do not know exactly how many yet.

Yes, I do all the work and raise chickens, turkeys, pigs, calves, colts, and oversee the whole ranch. My husband is a carpenter by trade, and gets his \$3.50 per day. As we want to get ahead this year we thought I could do the work here and let him work at his trade this year. But next year he will stay at home I hope, as his help is needed very much. I am going to increase up to 150 colonies next year, and try to keep that many on hand all the time. I do not want any more than that.

We have a foot-hill ranch of 320 acres, 5 miles from town or neighbors. One small apiary is all there is near us, and that is over a mile. White sage is just beginning to bloom, and I do not think that there is any better honey than that produced.

I like to read the sister bee-keepers' letters and their experiences. I have three children, the oldest a boy of 16. He will help me extract, but the stock takes up most of his time, and my two girls will be lots of help now. Our school is just out, and I am not sorry. I stay alone most of the time, but I do not notice it, because I am so busy all the time. I make frames, get my hives in the knock down and put them together. I had Simplicity hives at first, but did not like them, so I got the Langstroth, and then I built a chicken-coop. Well, I do any kind of carpenter work for anything I need. I think a woman can just do anything she wants to. My husband says that when I get hold of anything I haven't sense enough to let go. But it is just pure stubbornness in me, nothing else. He said he was afraid to leave me with the ranch to run, and everything to do, as it was so hard for me. But I have made out, and now it is vacation, and things will work along fine. I will get everything done up in shape, and in September go to the coast for awhile.

I do not see how our corner in the Bee Journal can be improved, unless the sisters write oftener. I always read that corner first. What I know about bees does not amount to much, but I can learn, and I am going to try hatching eggs over bees, and will let you know about it. If I try it myself then I will know for certain.

Does Mr. York buy honey direct from the bee-keepers? I should like to avoid the middle man.

Riverside Co., Calif., May 22. MARY E. AVERA.

Well! you certainly do have your hands full. You certainly are a helpmeet, indeed. How nice to be able to have the help of your three children—nice for you, and for them, too. I think you are pretty brave to stay alone most of the time 5 miles from town or neighbors. I hope you may be able to take that well-earned trip to the coast in September, and that it may be a very enjoyable one.

I shall watch with interest to learn how those eggs turn out.

I think Mr. York has sometimes bought honey direct from the bee-keepers.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Transferred Colony Deserting or Swarming.

I am having some experience with the bees that is different from anything I have met with before. I am handling bees for some of my neighbors. Mr. H. called me to transfer a swarm from a box to a Langstroth hive. The next day he found them all back in the box, which had been standing a short distance away. I drove them into a small box and cut the comb out and tied it into the frames of the new hive. They appeared to be contented for eight days when they came out and left without settling or even halting. They built two pieces of new comb as large as my hand. Now, please tell me why these things are thus.

GEORGIA.

ANSWER.—It isn't entirely clear from what you say just how matters were. You say you transferred, and the next

day cut out the combs. From that I suppose that the first day you merely drummed out the bees into an empty hive, and it would be nothing very strange for them to desert that and return to their old home. I don't know about the swarming eight days later, but if they were transferred and put on their old combs it hardly seems possible they would totally desert, but it looks more like a case of genuine swarming.

Laying Workers—Removing all Queen-Cells.

1. Will you kindly answer, through the American Bee Journal, what I am to do with a colony of bees that has a laying worker? The hive is full of drones, also quite a number of workers.

2. What will be the consequence of removing all queen-cells from a colony that eight days previous had cast a swarm? Will the colony have to be re-queened?

IOWA.

ANSWERS.—1. The hive being full of drones, there are probably not many workers, and the few that are left are quite old, so the best thing is to break up the colony, distributing the combs, bees and all, to other colonies.

2. Very likely the colony would be all right, for a young queen may have hatched already, but if no young queen has emerged the colony will be hopelessly queenless.

Queen Mating Twice.

Thirty years ago I was a breeder of Italian queens in Indiana. I have seen many queens leave the hive on the bridal trip, but never knew nor heard of one leaving the hive on two days in succession, and in both cases leaving unmistakable evidence of a successful trip. Did you ever know of such a case?

The way I came to know this to be true was by seeing a queen in May, just past, leave the hive and return. The next day, about 2 p.m., I was taking the drones out of a trap that I had set at this particular hive, as I did not want it heavily stocked with drones now, that this young queen had made her bridal trip. While clearing out the trap this same queen flew down upon the landing of the front of the hive and went in and leaving, as on the previous day, positive evidence of a successful trip.

I call attention to this in order that if it is common persons should not destroy the drones until the queens begin to lay eggs.

KANSAS.

ANSWER.—No, I never had any such case come under my observation. I have read of one or more cases occurring across the ocean, but I think this is the first case I ever heard of in this country. The case is interesting for its rarity, but I think it is of such infrequent occurrence that it need not make any difference as to the keeping of drones. Possibly, however, it is of more frequent occurrence than I think.

Keeping Bees—How, Why, and What For?

1. How do you keep bees?
2. Why do you keep bees?
3. Would you advise me to keep bees? If so, what for?

WASHINGTON.

ANSWERS.—1. Your question is such a comprehensive one that it is impossible to find room for a full answer in this department. Indeed, I have written a whole book in trying to answer the question, and it is none too fully answered then. Answering in the most general way, I keep bees in dovetailed hives and run for comb honey. If you will specify any particular point you want me to tell about, I'll be glad to answer further.

2. Partly for the enjoyment of it, partly for the money in it, and partly for the intense interest in unsolved problems all the time coming up in connection with the pursuit.

3. I don't know. I'd like to get pretty well acquainted with you before answering. You might invite me to spend a fortnight with you at your home when I have leisure, so as to learn something of your habits, tastes, and capabilities. But then I hardly expect to have the leisure short of twenty years, and you might not want to wait so long. Answering the last part of your question first, you might want to keep bees for the sake of your health, if you are kept indoors most of the time; if your taste runs strongly in that direction you might keep a few for pleasure; if you

are in a good locality for bees with no bee-keeper near, and are rightly built for business, you might go into it for profit; you might also go into it for the sake of having honey of your own producing constantly on the table. Taking your question as a whole, if the ground is already occupied by other bee-keepers located within a mile or two, it is hardly advisable for you to trespass on their preoccupied territory. If the way is clear, and you are impressed with the idea that you might be of the right material for a successful bee-keeper, try it on a small scale, beginning with not more than two or three colonies, and actual experience will tell better than the most experienced bee-keeper can tell by guessing at it, whether you can be successful or not.

Shaken Swarm Without the Shaking.

About two weeks before the white honey-flow was expected I placed under some of my strongest colonies hives containing full sheets of foundation and combs. Then a few days before the honey-flow I made some frames just the size of the hives, of "parting stop" (a strip of wood $\frac{1}{2} \times \frac{3}{4}$ inches), mitered at the corners, and covered these frames with galvanized-wire screening, all but one corner, where I put a piece of queen-excluder containing just one hole. Then where the queen had not commenced to lay in the lower hive I placed one of the frames from the upper hive containing the least brood, eggs, etc., and put the empty comb in the place of it. Then with little smoke I drove nearly all the bees below; put the wire-screen over the lower hive, and the upper hive above. I examined them in three days, and in every case found the queen was below and filling every frame full of eggs, just as she would do if it was a newly-hived swarm, and enough bees were going up through that one hole to care for the eggs and brood above. Then I placed a super on the lower hive, with either drawn comb or foundation in the boxes, and placed the upper hive and screen above the super. Now—

1. Isn't this practically a shaken swarm without the shaking?

2. Won't I avoid swarming?

3. Will they store surplus honey in the super, as it is nearest their brood-nest, or will they go to the trouble of taking it up through that one small hole, away back in one corner, and filling those old combs? They have shown no disposition to start queen-cells in the upper hive. I think it is because of the screen. If everything works right I intend to drive them all below in 21 days, and pile on the supers, of course watching them in the meantime and giving them plenty of super-room.

We, in this part of Iowa, look for a grand white clover honey harvest this year. IOWA.

ANSWERS.—In this case I feel very much more like asking then answering questions, being very much interested in the outcome of your experiment, and would rather say I don't know, and ask you to tell us after you've been through the mill. But if you promise faithfully to report after the experiment is finished, I'll answer as well as I can.

1. It is certainly very much like it, but also like a plan given by G. W. Demaree years ago, only he used the ordinary queen-excluder instead of the wire-cloth or screening, and I suspect that makes a decided difference as to the promptness with which the bees begin work below. That is, I think they will begin work much more promptly with your plan than with the excluder. The Demaree plan is simply to give an empty story under the full one, with an excluder between, putting the queen in the lower story. The bees easily going up through the excluder, the queen does not lay in the lower story generally for two or three days, and Delos Wood reports that with him the plan is an utter failure, the queen not laying at all. In your plan, however, you have so little connection between the lower and the upper story that the bees which have been smoked below probably feel about the same as if there were no brood above, so that after all they are much like a shaken swarm.

2. I am inclined to think you will. Be sure to tell us when you know.

3. I don't know, and I want very much to learn about it from you.

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THE RURAL CALIFORNIAN, 218 North Main Street, - LOS ANGELES, CAL.

FROM MANY FIELDS

Bees Doing Well.

Bees are doing well here this year. Some honey has already been taken off. There were very few swarms, and they were the earliest I ever saw, coming in April and the first of May; none after May 10. C. A. WOMACK. Mecklenburg Co., Va., June 16.

Heavy Loss of Bees.

Over 50 percent of our bees in this county have spring-killed, and the balance are very weak. The honey crop will be very small this year in this county. ANDREW NELSON. Emery Co., Utah, June 17.

Prospect for a Good Crop.

Bees are doing fine just now. There is every prospect for a good honey crop in this locality. P. H. DAVIS. Hennepin Co., Minn., June 16.

Favorable Season—Drones—Laying Queens.

The weather in eastern Ontario has not been favorable for a honey crop so far this season. Between April 4th and June 11th, we had practically no rain, only about $\frac{1}{8}$ of an inch fell in all that time. However, there was an extraordinary crop of dandelions from which the bees got enough to keep up breeding. There was also a very good fruit-bloom for a few days. The bees have worked more on red clover here this season than I ever knew them to do before. I presume it is on account of the smallness and shortness of the clover blossoms, as the result of the dry weather which permitted them to reach the bottom of the nectar cell. They are also work-

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204tf HENRY ALLEY, WENHAM, MASS.

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 Special Car
**Friday,
 August 14th,
 10 p.m.**
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 Tuesday, August 18th,
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Round Trip—Los Angeles, August 1st to 14th,
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6A26t

ing largely on wild mustard, which grows among the grain on many farms in this section. I was not aware that the honey-bee worked to any extent on this plant.

On the 11th and 12th inst. we had a glorious rain, and the weather has been cool and moist since. White clover is appearing in considerable quantities, and if weather conditions now continue favorable we expect to be into the honey-flow about next week.

I put on my section supers last week. Three of the colonies are working like Trojans in the sections; the others seem a little lazy at starting.

Tell Dr. Miller that my colony with laying workers didn't have any laying workers, after all, but it had a drone-laying queen—a late arrival last fall, I suppose. When you wrote me that you could not supply me with a queen for some weeks, I simply pinched her head off and set the hive over another colony, which was not very strong in bees. The two together made a splendid colony, and the new arrivals did not molest the other queen; in fact, she has done far better work since I united them than before. W. A. HANNA.

Ontario, Canada, June 16.

Not a Promising Season.

With us during fruit-bloom the weather was rainy, and the locust trees failed to bloom, therefore a considerable source for honey was a failure. Basswood is scarce, and white clover not abundant. W. R. YOUNG.

Frederick Co., Md., June 13.

Italians vs. Blacks—Great Breeders.

On page 365, Geo. B. Whitcomb is prepared for, was, and is expecting, the support of G. M. Doolittle, but I will send him a shell or two, and after the smoke has cleared away he will see that "foxy old grandpa" is on the other side.

In the first place, Mr. Doolittle has Italian queens that are equal to any queens in America, and he would not exchange one of his Italians for a half-dozen blacks. Nor does he agree with Dr. Gallup on his umbilical-cord theory. In fact, the best authority gives it a black eye.

Now, as to Mr. Alley's queens, I have never seen any of them, but I am satisfied that the queens were all right when they were mailed, but nearly if not all queens are injured to some extent in shipping through the mails. I have never had a queen from a distance that was any good, but I use them as breeders only, and rear as good queens from them as can be found in America.

Now, Mr. Whitcomb, get yourself a pure Italian queen, and rear a lot of queens from her and requeen your apiary with them, and you will have no more use for blacks.

Now, while my gun is loaded, I will fire a shot at A. C. F. Bartz. On page 360, Mr. Bartz, in speaking of stimulating brood-rearing in spring, says the bees having been out of the cellar about a month or more, four or more combs are being filled by the hundreds every minute. Now, look here, hundreds of bees hatching every minute four or more combs—hundreds means at least 200, so 200 every minute means 288,000 bees in 24 hours, or 5,948,000 bees in 21 days. That's very good, Mr. Bartz, for a queen with four or more combs. A. S. ANDERSON.

Kendall Co., Tex., June 14.

Transferring Bees—Saving Combs.

On page 376, Miss Rebecca Halley describes how she transferred a colony of bees. No comb or brood was transferred, but comb foundation was offered as a starter, and, of course, something of an inducement to the bees to occupy a new home.

I have transferred hundreds of colonies from all manner of cavities, such as trees in the forest, round log hives, board box-hives, etc. Oftentimes the comb was worthless, or about so, except such as contained brood often hatching in large numbers. To transfer this for the double purpose of saving the young bees and serving as an inducement to the bees to occupy their new home I deem good economy, even if the comb is too poor to

be of value in the hive after the young bees have hatched and the colony is permanently and satisfactorily established in their new quarters. For it can then be removed, and comb foundation can be substituted.

My method of fitting such old comb in the frames is to lay the frame on a board where the pieces of comb can be fitted in by straightening their edges with a knife, and I have used as many as a dozen pieces to fill one frame. To hold them in position I use splints not to exceed $\frac{1}{4}$ of an inch in diameter, cut so as to extend about $\frac{1}{4}$ of an inch above and below the top and bottom-bars. These splints are notched at each end and wired together. I have put on as many as six pairs of splints on one frame. The bees will weld the comb together in two or three days, and fasten it to the frame, after which the splints should be removed, if it is intended to let the combs remain after the brood has hatched.

But because comb is dark only it should not be condemned, as it is often valuable. I have frequently found good worker-comb full of brood in sheets that would fill a standard Langstroth frame, which would contain about 3,000 bees, and were well worth saving, even if the comb is discarded as soon as the brood has emerged.

The matter of first driving the bees out of the old hive is of much importance, which can be readily accomplished by turning the old hive mouth up; putting a box or a nail-keg over the mouth of the hive will answer a good purpose to hold them until the comb is transferred to the new hive and placed on the new stand, where the bees can be hived as we have any natural swarm, and they will not desert it.

G. BOHRER, M. D.

Beedom Boiled Down

Brood-Rearing in Cuba.

A. I. Root, who is at present amusing himself watching his 500 colonies in Cuba, reports this in Gleanings in Bee Culture:

We have found trouble so far in getting the bees to rear brood in the winter time. The weather is certainly warm enough, and pollen is coming in great plenty; but the brood-nest is apparently so filled with honey that the queen can not find a place to deposit eggs. I have been very reluctant to accept this as an explanation; but other bee-keepers assure me such is the case, and some of them say our red-clover strain is worse than any other in thus filling every empty space with honey. I have suggested getting hybrids, or, better still, some of the Syrian or Holy Land bees, that are such persistent rearers of brood in season and out of season; but the objection is made that they swarm so much the remedy is worse than the disease. All agree the red-clover bees are the fellows for honey if we could only keep up the population of the hives. Throwing out the honey with the extractor seems to be the only remedy, and some seem to think the great objection to producing comb honey here is the filling of the brood-nest with honey so no young bees can be reared.

Dry Cellars and Lots of Pure Air.

These suit T. F. Bingham, the smoker man. He says in the Bee-Keepers' Review:

We are well pleased with our cellar experiments and believe (mind you, believe, not know) that in less than 20 years it will be demonstrated that the temperature of a beecellar (I mean a cement cellar, not a house-cellar) may go up and down, from frost to 50 degrees without injury to the bees if only the air is as pure and dry as it is out-of-doors. I have no cellars to sell, but I am aware that a cement beecellar, to be first-class, ought to be built just as soon as the snow goes off, and be sawdusted and dried all summer, so as to be absolutely seasoned before the bees are put into it.

It must be borne in mind that, at present,

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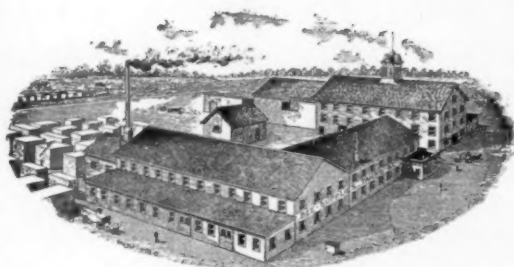
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Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

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We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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cement is the only cheap material that will furnish the warmth of the earth without the moisture of the soil or water surrounding it.

A dry room surrounded by the warm earth must be depended upon in order to allow the central upward ventilating flues. It is alone by them that dry, fresh air can at present be supplied in sufficient volume to meet the demand of the bees. My three flues are all wide open now; and the bees are not roaring because they have or have not a "sniff" of the spring air.

These three flues have a superficial area of 716 inches, equal to one flue about five feet wide by one foot thick, reaching up into the air sixteen feet.

The Queen's Retinue.

That retinue surrounding the queen is something after this fashion in this locality:

Under normal circumstances, when a queen is traveling over the comb, no worker accompanies her. If she runs against the hind end of a worker, the worker will pay no more attention to her than to another worker. If, however, the worker is in such position that she can recognize the presence of the queen, whether the queen touches her or not, the worker will invariably squarely face the queen; and if the queen stands still long enough there will be a circle of bees all facing centrally. As soon, however, as the queen moves on, the circle breaks up, never to be formed again of the same bees.—Gleanings in Bee-Culture.

Uniting Weak Colonies.

The following discussion upon this topic at the Ontario convention is taken from the Canadian Bee Journal:

Mr. Chrysler—In August or the first of September, I simply set one on top of the other for a few days and get them all in one hive-body; if they needed feeding for the winter I would feed them then. I would pay no attention to the queens; they settle that themselves.

Mr. Dickenson—Unless you knew one queen was better than another?

Mr. Chrysler—Oh, certainly.

Mr. Byer—Wouldn't a number of bees go back to their old stand?

Mr. Chrysler—I wouldn't care very much for that.

Mr. McEvoy—Did I understand Mr. Chrysler to say he simply set one on top of the other and unite them?

Mr. Chrysler—I would set them on top of one another and let them be like that for a few days when I would come along again and dispose of the frames not occupied and get them all in one hive-body; they would be one colony then.

Mr. McEvoy—I would get the bees to fill themselves pretty thoroughly upon their own stand and do the work in the evenings as late as I could do it and then unite them at once. I would raise the hive 2 or 3 inches from the bottom and shake the bees down and let them run in and give them a fair smoking so as to knock all the fight out of them.

Mr. Heise—I go to the hives I wish to unite and remove all the frames except just what the bees occupy; I do that one evening and the next evening I come along and generally lift three out of one hive and place them in the other, leaving space for one frame between; let them remain on those for three or four days or a week and then I put the rest of the frames in and I have never noticed any fight.

Empty or Filled Frames for Forced Swarms?

J. F. Crane says, in *Gleanings in Bee-Culture*:

If we shake our bees into an empty hive there will be a loss of ten days to two weeks (usually), unless they are very strong, and honey very abundant, before they will do much in the surplus apartment. Some writers say they can get more surplus honey when a swarm is compelled to build combs in the brood-chamber than when given founda-

Prize = Winning Stock

Daughters of Moore's famous long-tongued red clover Italian Queen, which won the \$25.00 prize offered by The A. I. Root Co. for the long-tongued bees; and also daughters of other famous long-tongued red-clover breeders whose bees "just roll in the honey," as Mr. Henry Schmidt, of Hutto, Tex., puts it, now ready to go by return mail. Untested Queens, 75c each; six, \$4.00; dozen, \$7.50. Selected Untested, \$1.00 each; six, \$5.00; dozen, \$9.00. Safe arrival and satisfaction guaranteed. Circular free.

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MOUNT UNION COLLEGE,
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Rural Telephones—Telephones are becoming very common in rural communities and the more they are used the greater their appreciation. The low cost of maintaining a service of this kind makes it possible for those who are in even very moderate circumstances to have telephone connection with their neighbors and with neighboring towns.



It may safely be said that the telephone has solved more problems than any other invention of modern times. It has made farm-life more attractive and brought into close communication those who have formerly been widely separated. It is now a common thing to have daily conversations with friends or relatives who live many miles away and where formerly exchange of friendly greeting or consultations concerning business was a matter of considerable time and a journey of several miles; it is now a matter of minutes and of going to a telephone in the house.

In the matter of business alone any farmer can well afford to pay the small cost of a telephone, for there will be dozens of times during the year when he can make or save money by being in almost instantaneous touch with his market town.

Putting in operation a telephone line is very simple. Any one can do it, and it requires no special skill to keep in repair and operate a line. There are numerous makes of telephones for rural lines on the market, but the ones made by the Stromberg-Carlson Telephone Mfg. Co., Chicago, Ill., is having the largest sale and is giving the best satisfaction. This is one of the oldest houses in this line in the country, and the telephones made by this Company have been found to be perfect in their adaptation to the uses of people in country places.

The Company publishes a very interesting Catalog, and we would advise our readers to send for one, and see for themselves how easy it is to "get on the line." Address, Stromberg-Carlson Telephone Mfg. Co., F 4, Chicago, Ill., and do not forget to say we invited you to do so.

Please mention Bee Journal when writing advertisers.

tion or combs; but that is not my experience. In 1901 I gave six or eight shaken swarms, that were very strong, brood-frames having only starters or half an inch of foundation under the top-bar; but I found such did not store nearly as much surplus as those given full sheets of foundation or old combs; and out of all there were not half a dozen good brood-combs—nearly all was drone-comb. So I find it much better to "shake" on to full frames of foundation well wired to shaking into empty hives.

But foundation has its drawbacks or disadvantages, or is not wholly satisfactory as a preventive of swarming. During the present season I shook some fifty or sixty colonies into hives with foundation. Some eight or ten of these swarmed out a day or two later, some of them without touching the foundation, while others drew it out a little and then decamped.

As my queens' wings were all clipped, some of the queens returned with a few bees with them while other colonies remained silent. Where the bees are content to stay on foundation they usually do well, although, if the queen is old or poor, they will frequently start a little brood and a few queen-cells, and then swarm again.

I have had the best results from "shaken" swarms when shaken on to old combs carried over from the previous year, or from hives where the bees died during the winter or spring. If these combs contain considerable honey it does no harm. I think I should prefer to have them about half full of honey. Last year I gave one such forced swarms a hive full of combs that were nearly solid with honey, and they did nicely. But if the combs are quite free of honey, and if you have a good-sized swarm, and honey is plentiful in the fields, they will soon have enough.

Spreading Brood.

This is practiced after the following fashion by the Texas editor of the Progressive Bee-Keeper:

We will take a normal colony at the opening of spring and as soon as we find that the queen has brood in two frames we will select two nice combs that are about one-third full of honey at the top and will set two of these combs one on each side of the two frames of brood; thus we will have two frames in the center of brood, the one next on each side partially empty, and beyond these the two combs of pollen.

In about two weeks we will return to this colony and we will find that the queen has extended her brood, and now has four frames filled. We will proceed as before and slip in two more combs next to the four containing

Italian Queens, Bees and Nuclei.



We have a strain of bees bred specially for honey-gathering and longevity, at the following prices:

One Untested Queen.....	\$.80
One Tested Queen.....	1.00
One Select Tested Queen.....	1.25
One Breeder Queen.....	2.00
One - Comb Nucleus (no Queen).....	1.10

Queens sent by return mail. Safe arrival guaranteed.

For price on Doz. lots send for catalog.

J. L. STRONG,
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Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.



PAGE

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Your wire fence don't sag if it's the PAGE.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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Catnip Seed Free!

We have some of the seed of that famous honey-producing plant—Catnip. It should be scattered in all waste-places for the bees. Price, postpaid, 15 cents per ounce; or 2 ounces mailed FREE to a regular subscriber for sending us one NEW subscriber to the Bee Journal for one year, with \$1.00; or for \$1.20 we will send the Bee Journal one year and 2 ounces of Catnip seed to any one.

GEORGE W. YORK & CO.

144 & 146 E. Erie St., CHICAGO, ILL.

BINGHAM'S PATENT
25 years the best. Send for Circular. **Smokers**
25Atf T. F. BINGHAM, Farwell, Mich.
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Complete Line of Lewis' Matchless Dovetail Hives and Supplies at Factory Prices.

HIGH-CLASS QUEENS. — Buckeye Strain Red Clover Queens, they roll in the honey while the ordinary starve.

Muth Strain Golden Italians, None Superior. **Carniolans,** None Better.

We guarantee safe arrival by return mail.

APRIL, MAY, JUNE.

Untested.....	\$1.00 each; 6 for \$ 5.00	Best money can buy.....	\$5.00 each.
Select Untested...	1.25 each; 6 for 6.00	2-frame Nuclei with Select Untested	
Tested.....	2.00 each; 6 for 10.00	Queen.....	\$2.75
Select Tested.....	3.00 each; 6 for 15.00		

Send for Catalog and see SPECIAL INDUCEMENTS.

THE FRED W. MUTH CO. Front & Walnut Sts., CINCINNATI, OHIO.

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Dittmer's Foundation!

Retail and Wholesale.

This foundation is made by a process that produces the superior of any. It is the cleanest and purest. It has the brightest color and sweetest odor. It is the most transparent, because it has the thinnest base. It is tough and clear as crystal, and gives more sheets to the pound than any other make.

Working wax into Foundation for Cash a Specialty. Beeswax always wanted at highest price.

Catalog giving FULL LINE OF SUPPLIES with prices and samples, FREE on application.

GUS. DITTMER, Augusta, Wis.

brood, always moving the pollen-combs towards the walls and finally making use of them for brood. Now, by the time the queen has the six frames full of brood we may expect that the two middle ones are about full of eggs again, the first eggs laid therein have hatched out. At this juncture, just as the queen begins filling them the second time, if we will insert, between the two middle combs, empty combs, they will be filled at once with eggs, and fuller than they would be filled if placed on the outside. There is one great truth to learn in spreading brood, and that is that we must not chop brood, and by this I mean placing empty combs in between combs of capped brood, or the giving of combs faster than the queens can fill or the bees keep warm.

Hiving Extraordinary—A True Story.

The following novel plan was adopted by an oldskeppist, owning, at least, 170 colonies of bees:

One hot day at the end of June several swarms issued simultaneously, and the bee-man had only three empty skeps, which would not hold one-half the bees. So, feeling sure that many other swarms would turn out during the day, he emptied the second lot in question into a sack and tied them up. Later the same day, as expected, many others (he could not say how many) of his numerous skeps followed suit, and the swarms were treated in the same way. Then he sent for more skeps, and ordered a long stand. When these came home a few days after, he untied the sack and laded out the bees with a hand-bowl. In this way nine skeps were filled, all of which were placed on the stand. This done, he turned the sack inside out and shook it! "Now, guv'ner" (he said, when I called a few days ago), "how is it them bees wouldn't bide? Every blessed skep was empty within a week. I knows there was £10 worth of bees went away." Then he added, "It's the wust season I ever knowed—stified 50 lots an' only got 7 cwt. of honey."—A COUNTRY PARSON, in the British Bee Journal.

How Shall Bee-Statistics Be Gathered?

S. E. Miller thinks we should invoke the aid of the general government. He says in the Bee-Keeper's Review:

In regard to a honey crop report, I think we should direct our energy toward the Department of Agriculture. I think that if the importance of this matter were fully shown up to the Secretary of Agriculture he would not hesitate to incorporate a honey report along with the regular crop report, as now issued. The National Bee-Keeper's Association would have to furnish him the names of intelligent bee-keepers throughout the country who would be willing to report regularly each month. No doubt they would be ex-



DAIRYMEN ARE DELIGHTED

to meet those who work for us. Cow keepers always have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars.

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Fourth of July

rates via the Nickel Plate Road. One fare for the round-trip, July 3d and 4th, within 200 miles of starting point. Return limit July 6th. Chicago Ticket Offices, 111 Adams St., and Auditorium Annex. Phones Central 2057 and Harrison 2208. 12—25A3t

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,

330 Market Street, SAN FRANCISCO, CAL.

pected to report on all agricultural crops at the same time. This would be very little additional expense to the department of Agriculture, compared to what it would cost the National Bee-Keepers' Association to gather it and print it for distribution, as the cost of postage alone would be a large item to the latter.

Pear-Blight, Ants, and Bees.

Editor Root makes a case against the ants as the carriers of pear-blight, exonerating the bees. He says:

The statement is made in American Gardening, referring to pear-blight, that the blighted twigs exude a milk-white liquid; that this fluid the bees are likely to get and spread to the flowers of healthy twigs which they may visit. The bees would have no occasion for sucking up the virus, and there is no use in laying the blame on them, where common ants (very numerous in California where the blight is the worst) crawl all through it and thence all over the trees. While the bees may spread the virus from a diseased to a healthy blossom, it is extremely improbable that they should seek out the poisonous sap from a diseased twig.

While I was in California looking through those great pear-orchards, so fearfully blighted, I saw ants in great numbers crawling all over the diseased and healthy twigs, and some of the twigs were covered with that deadly milky fluid. I believe the time will come when it will be proven that the bees are not the chief means of spreading the blight; that those ever-present ants, that are continually crawling over the trees from top to bottom, will be declared to be the real culprits.—Gleanings in Bee-Culture.

Close Saturdays at 1 p.m.—Our customers and friends will kindly remember that beginning with July 1, for three months we will close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

CONVENTION NOTICE.

Texas.—The Texas Bee-Keepers' Association meets in annual convention at the Agricultural and Mechanical College, at College Station, Texas, July 7 to 10, inclusive, during the Texas Farmers' Congress meetings. Cheap excursion rates. Large crowds. A good time. Learn a heap. Meet your fellow-men, and talk. Exhibits of all kinds of stuff. Premiums of all kinds awarded. Come, and bring what you have, and take home some of the premiums. You are invited. Be sure to be there. July 7 to 10, 1903, at the A. & M. C. of Texas, College Station, Hunter, Texas. **LOUIS H. SCHOLL, Sec.**

\$5 TO START YOU IN BUSINESS
We will present you with the first \$5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.
DRAPER PUBLISHING CO., Chicago, Ills.

Italian Queens, by Mail.

Golden and Honey Queens.

	July and August.	1	6	12
Honey Queens (Untested)...	\$.75	\$4.00	\$7.00	
Golden " (Tested)....	1.25	6.00	11.00	
Golden " (Untested)...	.75	4.00	7.00	
" " (Tested)....	1.25	6.00	11.00	
2-frame Nucleus (no queen) 2.00		11.00	21.00	
Breeders, \$3.00 each, after June 1.				

Add price of any Queen wanted with Nucleus. Our bees are shipped in light shipping-cases. Purchaser pays express on Nuclei. Safe arrival guaranteed of all stock sent out.

BATAVIA, ILL., Aug. 21, 1901.

Dear Sir:—I thought I would let you know as to results of the nucleus sent me. They were placed in 10-frame hives and now they are in fine condition. From one I removed 24 pounds of honey and had to give 6 of them more room, as they were hanging out. They have more than reached my expectations.

Yours respectfully, **E. K. MEREDITH.**

DAVENPORT, IOWA, Dec. 31, 1901.

Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The golden can be handled without smoke or veil. Very truly yours,

JOHN THORMING.

Notice.—No tested stock sent out before May 15. Send money by P. O. Money Order or Express Order. **D. J. BLOCHER.**
17Atf **PEARL CITY, ILL.**

Hives, Sections, Foundation,

etc. We can save you money. Send list of goods wanted and let us quote you prices. **ROOT'S GOODS ONLY.** Send for Catalog.

M. H. HUNT & SON, Bell Branch, Mich.

Wanted, to Buy

BLACK NATIVE BEES, about 50 colonies. Address, **BOX 21. VINELAND, MICH.**

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This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x8½ inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,

144 & 146 Erie Street, CHICAGO ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, June 5.—The market is lifeless, no movement except extracted at low prices. Best grades of white extracted, 5¼¢ cents; amber, 5¢5¼¢. Comb honey is held at 15¢ for choice white, and anything not grading up to meet this requirement sold at 2¢5¢ less per pound. Beeswax, 32¢. **R. A. BURNETT & Co.**

KANSAS CITY, June 9.—No comb honey in our market. White or light amber would sell quickly at \$3.50 for 24-section cases. Demand light for extracted, at from 5¼¢6¼¢. Beeswax in demand at 25¢30¢. **C. C. CLEMONS & Co.**

ALBANY, N. Y., June 20.—Honey market quiet here; prices nominal and light receipts. We quote light comb, 15¢16¢; mixed, 14¢15¢. Extracted, white, 6¼¢7¼¢; amber, 6¢6¼¢; dark 5¼¢6¢. Beeswax, 31¢32¢. **H. R. WRIGHT.**

CINCINNATI, June 1.—Very little change in market from last report. We quote amber extracted grades at 5¼¢6¼¢ in barrels; white clover, 8¢9¢; supply equal to demand. Comb honey, 15¢16¢ for fancy. Beeswax, 30¢. **THE FRED W. MUTH CO**

NEW YORK, May 21.—Comb honey trade exceptionally quiet, very little doing. Fancy stock not plentiful and is sold at 14¢. A large supply of other grades on hand, which we are quoting at from 11¢13¢, according to quality and in large lots make concessions from these prices. Extracted, unusually quiet, and prices show a downward tendency all along the line. Beeswax, firm at from 30¢31¢.

HILDRETH & SHOELKEN.

CINCINNATI, June 8.—We have reached the time when there is no settled prices in the honey market. Everybody is waiting to learn how the crop will turn out, therefore we will sell or ask the old price; fancy water-white comb brings 15¢16¢. Extracted, amber, in barrels, 5¼¢5½¢; in cans, 6¢6¼¢; white clover, 8¢8½¢. Beeswax, 30¢. **C. H. W. WEBER.**

WANTED WHITE CLOVER EXTRACTED HONEY!

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

THE FRED W. MUTH CO.

32Atf Front and Walnut, CINCINNATI, OHIO.

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WANTED!

CALIFORNIA COMB HONEY in car-lots. It will pay you to correspond with us.

THOS. C. STANLEY & SON,

24Atf MANZANOLA, COLO., or FAIRFIELD, ILL.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

C. H. W. WEBER,

2146-48 Central Ave., CINCINNATI, OHIO.

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FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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VENTILATED BUSHEL CRATES

These crates are the most convenient things that can be used on the farm. Apples, potatoes and other fruits and vegetables can be gathered, stored and taken to market in them without re-handling. They allow air to circulate freely through them. Our crates cost 8 cents each ready to nail together. Made of best material and with decent care will last a lifetime. Can be "nested" together to store away. Our illustrated booklet No. 11 telling all about them free.

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Everything used by bee-keepers. **POUDER'S HONEY-JARS.** Prompt service. Low Freight Rates. **NEW CATALOG FREE.**

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are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed.** We are undersold by no one. Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

—THE—
W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N.H., carries a full line of our goods at catalog prices. Order of him and save the freight.

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Fourth of July Excursion

over the Nickel Plate Road at one fare for the round-trip, within a radius of 200 miles from starting point. Tickets on sale July 3d and 4th, with return limit of July 6th. Through trains daily in each direction between Chicago, Cleveland, Buffalo, New York, Boston, and intermediate points. Every facility offered for the comfort of the traveling public. Individual Club Meals, ranging in price from 35c to \$1.00, and meals a la carte, in dining-cars on Nickel Plate Road. City Ticket Offices, 111 Adams St., and Auditorium Annex. 'Phones Central 2057 and Harrison 2208. 13—25A3t

Bee-Keepers, Remember

that the freight rates from Toledo are the lowest of any city in the U.S. We sell

Root's Supplies at their Factory Prices * * * * *

Poultry Supplies and Hardware Implements a specialty. Send for our free Illustrated Catalog. Honey and Beeswax wanted.

GRIGGS BROS.,
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TOLEDO, OHIO.

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\$300,000,000.00 A YEAR
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.

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Catalog Price on

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26th Year Dadant's Foundation 26th Year

We guarantee Satisfaction. What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED-PROCESS SHEETING.

Why does it sell so well? Because it has always given better satisfaction than any other. Because in 25 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies OF ALL KINDS *****

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, \$1.20, by mail.

BEESWAX WANTED
at all times.

DADANT & SON,
Hamilton, Hancock Co., Ill

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THE JUNE FIRST NUMBER OF

Gleanings in Bee-Culture



contains two very interesting articles, both of which are fully illustrated with new views, to-wit,

Bee-Keeping in Jamaica

—AND—

Glimpses of Cuban Apiaries.

—O—

Page 516 of this issue contains a price-list of the NEW

Aikin Honey-Bags.

This new package for the putting up of Extracted Honey was fully described in the Mar. 1st number by Mr. Aikin. This is something that should interest every producer of liquid honey.

Gleanings one year and one Untested Italian Queen, \$1.00. We are mailing these promptly. Gleanings 6 months, 25 cents.

THE A. I. ROOT CO., Medina, Ohio, U.S.A.

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